beginning of CC Docket No. 87-313⁸⁶ and two studies conducted by the Commission during the proceeding.⁸⁷ Because there were numerous studies at the time of the first Notice of Proposed Rulemaking in CC Docket No. 87-313, a record was fully developed after meaningful comment by interested parties. In this proceeding, no similar record has been or will be developed.

Secondly, the transition from inefficient regulation to a form of regulation that was designed to improve the efficiency of telcos was deemed to warrant a "consumer productivity dividend." Because cable companies have never been subject to the regulatory distortions created by cost-of-service regulation, there simply is no basis to assume that an analogous transition is needed.

Finally, even if the FCC were inclined to adopt its proposal, it is infeasible during a 40 day notice and comment period for any commenter to supply the Commission with a credible examination of the cable industry's productivity history. The Commission need only examine the time and resources it took to prescribe productivity offsets for AT&T and the LECs in CC Docket

See, e.g., Policy and Rules Concerning Rates for Dominant Carriers, 3 FCC Rcd 3195, 3401 (1988) and 5 FCC Rcd 2873, 2976 (1989) (discussions of Christensen study).

See J. Frentrup & M. Uretsky, <u>A Study of Local Exchange Carrier Post-Divestiture Switched Access Productivity</u>, 5 FCC Rcd 2176 (Appx. C) (1990); T. Spavins & J. Lande, <u>Total Telephone Productivity in the Pre and Post-Divestiture Periods</u>, 5 FCC Rcd 2176 (Appx. D) (1990).

Policy and Rules Concerning Rates for Dominant Carriers, 3 FCC Rcd 3195, 3407 (1988).

87-313. It took four notices, two orders, and one reconsideration over nearly four years to prescribe productivity offsets for AT&T and the LECs. 89 Furthermore, if a comprehensive study is proposed as part of the initial comments, a 20 day response period will be an insufficient amount of time to critique and reply to it. And adoption of the telco factor, under the guise that telcos and cable companies are all providing "telecommunications" would simply be arbitrary. Indeed, to the extent the FCC has any data on the relative performance of the two industries, it strongly suggests that they are markedly different. Comments of Continental Cablevision, Inc., MM Docket No. 92-266, Appendix C at 9-11 (filed January 27, 1993).

There is no evidence to suggest that the productivity gains already reflected in the GNP-PI are not adequate here. Especially given the Congress' directive to keep rate regulation as simple as possible, the Commission should conclude that it will not pursue a productivity offset for cable companies.

See Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Notice of Proposed Rulemaking, 2 FCC Rcd 5208 (1987); Further Notice of Proposed Rulemaking, 3 FCC Rcd 3195 (1988); Report and Order and Second Further Notice of Proposed Rulemaking, 4 FCC Rcd 2873 (1989); Supplemental Notice of Proposed Rulemaking, 5 FCC Rcd 2176 (1990); Second Report and Order, 5 FCC Rcd. 6786 (1990); Order on Reconsideration, 6 FCC Rcd 2637 (1991).

CONCLUSION

The explicit purpose for adopting a "backstop" approach is to allow cable operators an opportunity to demonstrate that they have unique and extraordinary costs that justify departure from the benchmark rates. Full-blown cost-of-service regulation is not required, or even desirable, to accomplish this objective. A streamlined approach with improvements upon the benchmark would be a far better alternative that is less burdensome for the Commission, local franchising authorities, and cable operators. Industry-wide requirements are not, at this time, appropriate. Not only does the Commission lack the information necessary with respect to these issues to adopt such requirements, but it severely restricts cable operators from showing that an injustice has occurred. Accordingly, TCI requests that the Commission adopt the proposals discussed herein.

> Respectfully submitted, TELE-COMMUNICATIONS, INC.

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AN ANALYSIS OF THE FCC'S PROPOSED CABLE COST-OF-SERVICE BACKSTOP

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I. Introduction

This paper addresses a number of the economic issues raised by the Commission in its Notice of Proposed Rulemaking on cost-ofservice rate regulation for cable television. We conclude that the approach suggested in the Notice is inconsistent with, and is unlikely to satisfy, the Commission's intent to provide rate relief to cable systems confronting unusually high costs. In addition to imposing substantial administrative costs on the Commission and the cable industry, the suggested approach exhibits all the well-known associated with traditional inefficiencies cost-of-service regulation. Our view of the Commission's proposal leads us to outline some less costly alternatives that we would urge the Commission to explore in greater detail before proceeding down its cost-of-service path. Finally, We address some implementation issues that must be faced by the Commission in the event it adopts the approach described in the Notice.

II. "Traditional" Cost-of-Service Regulation Is Inconsistent with a Backstop Approach

The Commission has referred to cost-of-service regulation as a "backstop" for its "primary" benchmark approach. Under the benchmark approach, limits on the rates that can be charged by cable systems deemed not to be subject to effective competition are based on the <u>rates</u> charged by systems that are subject to such

In the Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Rate Regulation, MM Docket No. 93-215, Adopted July 15, 1993. All Paragraph references in this paper are to the Notice.

competition. Presumably, these rates are thought to approximate the <u>costs</u> of these systems, as in other competitive markets. Cable systems may charge rates that are at or below these competitive benchmarks.

Systems that had been charging rates that exceed the benchmark on September 30, 1992 are required to reduce rates to the benchmark unless this requires a rate reduction in excess of 10 percent. If a larger rate change is required, the reduction is limited to 10 percent.

The Commission has also established a price cap mechanism that permits future rate increases if certain conditions are met. In particular, cable systems are permitted to increase their rates over time to reflect economy-wide inflation and "increases in external costs, including programming costs, costs of franchise requirements, taxes, and franchise fees." (Paragraph 3)

Cost-of-service regulation is characterized by the Commission as a "backstop." The purpose of this backstop is to permit cable systems that have unusually high costs to charge rates in excess of those permitted by the benchmark approach. Thus, cable systems would be permitted to seek to demonstrate that they should not be required to reduce their rates either to the benchmark, or by 10 percent, because higher rates are justified by their higher costs.

The Commission's price cap mechanism sensibly permits cable systems whose external costs increase very rapidly to recover those

^{2 &}quot;Our regulations should not preclude cable operators facing
unusual operating costs to recover such costs in rates for cable
service." (Paragraph 13)

cost <u>increases</u>. However, the benchmark rates do not take into account the fact that some systems have costs that are <u>initially</u> unusually high. Thus, the Commission's backstop mechanism can be thought of as a relative of its price cap approach, but one that is applied to <u>levels</u> rather than to <u>changes</u> in costs.

Since rates for competitive systems are presumably determined by their costs, a showing that rates should not be limited by the benchmarks thus requires evidence that a system's costs exceed those of an average system. This means, of course, that a presumption that some element of a system's costs conforms to an industry average is inconsistent with the purpose of the cost-of-service backstop. Thus, for example, specifying an allowed rate of return based on an estimate of the average cost of capital for the cable industry would be incompatible with the use of cost-of-service regulation as a backstop, no matter how accurate the estimate might be. Under the Commission's approach, a system must be afforded an opportunity to demonstrate that its cost of capital is different from the industry average, and there should be no presumption that it is not.

To be clear, we are not making a point about the prerogatives available to the Commission under the law, but instead pointing out that a presumption that a given system has costs equal to the industry average is inconsistent with the Commission's own characterization of its regulatory objectives. Allowing individual

³Below, we discuss the issue of which systems to include in calculating the average.

cable operators to attempt to demonstrate that they have an unusually high cost of capital would be likely, as the Commission claims, to result in an "increased burden on franchise authorities, cable operators, and the Commission." (Paragraph 46) But this is irrelevant to determining whether a particular operator should be permitted to increase its rates above the benchmark, since the reduction in administrative burden is accomplished entirely by preventing showings that these costs are unusual. Nor is it likely to be of any consolation to an operator with a high cost of capital to be told that the Commission believes "the factors on which a rate-of-return is based are [not] likely to be so different that it is necessary to establish separate rates-of-return." (Paragraph 47) 4

Moreover, this problem cannot be resolved by "establishing rates- of-return for groups or types of cable operators based on the major considerations that can guide establishment of rates-of-return." (Paragraph 47) What is relevant in determining whether a cable system should be permitted to charge higher than benchmark rates is whether its costs exceed those of the systems used to establish the benchmark, not the average cost of the group of which it is a member.

Under the Commission's approach, the only purpose of estimating an average industry cost would be to provide a reference

⁴We are unaware of the basis for the Commission's belief. Perhaps over time, those factors that cause significant differences in the costs of cable systems will be identified, and they will become the focus of most, if not all, cost-of-service proceedings.

point against which systems might compare themselves. Thus, for example, a system might attempt to show that its cost of capital exceeds the Commission's estimate of the average cost of capital for the cable industry. However, even if such reference points were to be developed, the Commission should remain open to demonstrations that these reference points are inappropriate for a particular system. Thus, for example, a system might be able to justify higher rates even if its cost of equity is equal to the industry average if it can demonstrate that, for some reason, it must employ more equity and less debt than does the average system.

Moreover, it is unlikely that, in an industry that is changing as rapidly as is cable, the cost standards that the Commission proposes to develop will be estimated accurately. A particularly important example in which cost estimates are likely to be inaccurate is the specification of depreciation rates for cable plant. Some cable systems may prefer to depreciate their plants at a rate faster than would be dictated by Commission-specified useful lives in order to provide more rapid service improvements to their subscribers. Limiting depreciation rates would reduce their incentives to do so. Cable systems that wish to upgrade their service should be permitted to seek to demonstrate that rates higher than the benchmark are justified by the higher costs of providing improved service. Unless this is permitted, regulated

systems could be forced to offer service that is of lower quality than that of their unregulated counterparts.⁵

Indeed, the Commission's proposal to specify depreciation rates is inherently inconsistent with the objective of permitting systems with unusually high costs to seek to recover them in higher rates, since the depreciation rates based on the Commission's estimates of useful lives need bear no relationship to the average rate of depreciation, or even to the depreciation rates of competitive systems. That is, there is no need at all for the Commission to specify useful lives in order to permit systems to recover unusual costs. Of the alternatives identified by the only "link[ing] depreciation to the circumstance in each franchise" (Paragraph 27) or "requiring cable operators to explain and justify depreciation practices in cost-ofservice showings" (Paragraph 29) are logically consistent with the use of cost-of-service regulation as a backstop for dealing with unusual situations.

Not only is it inconsistent with the purpose of the backstop approach to assume that some elements of a petitioning system's costs are equal to the industry average, but it is also inconsistent for the Commission to propose requiring "that in any cost-of-service showing, costs and supporting data be presented on

⁵This problem would clearly be exacerbated if the Commission were to prescribe "depreciation schedules designed to allow recovery of capitalized costs over the <u>maximum reasonable expected life</u> of the plant." (Paragraph 28, emphasis added)

an FCC prescribed form and associated worksheets." (Paragraph 19)
The Commission proposes that:

The form and accompanying worksheets would embody the cost-of-service standards, cost allocation, and cost accounting requirements that we will adopt in this proceeding. The form would require explanations and descriptions of cost information and averaging and allocations used, to the extent not prescribed by the Commission, to permit evaluation of the showing by regulators. (Paragraph 19)

However, if the Commission were to prescribe the form and content of each showing, its procedures would limit the ability of cable systems to demonstrate the existence of the very "special circumstances or extraordinary costs" (Paragraph 18) that the backstop approach is intended to take into account. Although the use of standardized forms and worksheets would "facilitate review of cost-of-service showings" (Paragraph 19), their use would be inconsistent with the purposes of the backstop approach. For these purposes, more flexible procedures are required. 6

Finally, the purpose of the backstop approach is fundamentally inconsistent with the Commission's attempt to resolve certain matters in this Rulemaking. For example, the Commission asks whether "cable operators on the record of this proceeding can demonstrate a need to allow [the costs of acquiring goodwill, customer lists, franchise rights, and other intangible assets] in ratebase." (Paragraph 40, emphasis added) Whether a particular

⁶We recognize that standardized procedures are likely to reduce the costs incurred by regulators in implementing cost-of-service regulation, but that does not justify their use when the purpose of the regulation is to deal with non-standard situations. We do agree that the procedures should be simplified, however, and we make a number of suggestions for doing so below.

system has unusual costs of acquiring intangible assets is not a matter that can be determined in a generic proceeding. Nor is it of any concern in determining the reasonableness of the rates of an individual operator whether "cable operators" can demonstrate the need to include these costs in the ratebase. These issues can only be resolved in the context of a particular cost-of-service proceeding.

III. Cost-of-Service Regulation as a Primary Backstop Will Likely Harm Consumers

Even if the standardized approach proposed in the Notice were compatible with its role as a backstop, the costs to consumers of this approach might be substantial. In an earlier paper submitted to the Commission⁷, we noted that a benchmark/price cap framework for the regulation of cable rates eliminated two major adverse incentives created by traditional cost-of-service regulation. In comparison to traditional cost-of service regulation, a benchmark approach can encourage cost-minimization by the regulated firm and service and process innovation. We also observed, however, that the extent to which efficient behavior is encouraged by the benchmark approach depends on the levels at which the benchmarks are set.

Because considerable uncertainty characterizes any empirical estimate of the competitive benchmark rate, we recommended in our

⁷Stanley M. Besen, Steven R. Brenner, and John R. Woodbury, "An Analysis of Cable Television Rate Regulation," submitted in this proceeding, January 27, 1993.

earlier paper that the Commission establish separate regulatory regimes, a "competitive" benchmark rate for basic programming services and a less restrictive "bad actor" regime for cable programming services. In the language of the current Notice, we envisioned the "bad actor" regime as the "backstop" for the regulation of basic rates. Our concern was then, and remains now, that regulated rates will be set too low, which will result in a reduction in the quality of cable service. In such a dual-rate regime, the adverse effects on incentives to offer new or improved services that would result from low regulated basic rates would be offset by the ability of cable operators to place such offerings on program service tiers whose rates were less rigidly constrained.

Because the Commission has rejected a dual regime in favor of a unitary regulatory scheme that applies to both basic and cable programming services, it is important to develop a workable and targeted alternative "backstop." Yet, the Commission is proposing to rely on cost-of-service regulation, with all of its recognized inefficiencies, as the "backstop." Equally worrisome, in a number of places the Notice seems to suggest that, in constructing the cost-of-service backstop, any disputes as to implementation should be resolved in favor of lower subscriber rates.8

While the use of cost-of-service regulation as a backstop will in theory be less costly to consumers, cable operators, and the Commission than if it were used as the primary regulatory framework, we conclude that the costs of such regulation will be so

⁸See, for example, Paragraph 34.

substantial that there will be few if any net benefits. 9 Moreover, because the extensive apparatus required to implement a cost-of-service backstop will be imposed on all cable systems whether or not they use it, we are concerned that the Commission and local franchising authorities will come to view traditional cost-of-service determinations as the primary tool for the regulation of cable rates.

Because the <u>Notice</u> seems to ignore the potential for consumer harm generated by cost-of-service regulation, we briefly reprise our concerns here. First, even a cursory reading of the <u>Notice</u> suggests how administratively costly this approach is likely to be. Both regulators and cable operators must expend considerable resources in an effort to identify, measure, and verify costs. As the <u>Notice</u> makes clear, attempting to specify virtually every component of the revenue requirement for cable systems is an exercise that will prove both onerous and controversial, resulting in extensive delays before the backstop is available for use.

Second, traditional cost-of-service determinations tend to reduce incentives for cost-minimization. In part, this results because any additional costs can be passed through to consumers. Moreover, because cable operators can charge no more than the Commission-determined cost of service, any cost savings for those systems that use the backstop will result in dollar-for-dollar rate

⁹In the previous section, we noted that the use of cost-of-service proceedings in any general (as opposed to franchise- or system-specific) manner is, by its very nature, inconsistent with its backstop role.

reductions, thus impairing incentives to find ways of cutting costs. In addition, cable operators will have incentives to incur excess capital expenditures if the allowed rate of return exceeds the "true" cost of capital.

To prevent such outcomes, the Commission seems to be suggesting that it is prepared to second-guess the investment and spending decisions of cable operators. For example, the Commission indicates that, in rendering a cost-of-service determination, it may rule on whether the costs associated with "excess" capacity, "cost overruns," and "premature abandonment" should be part of the calculus. 10 Elsewhere (Paragraph 75), the Commission indicates that it is considering requiring cable operators to seek advance approval of their plans to upgrade their systems to ensure that the costs of doing so will be included in the rate base. Consideration of this kind of regulatory micromanagement may stem from concern about the disincentive effects of cost-of-service regulation, but the proposed cure may be worse than the self-inflicted disease. We can think of no better prescription for regulatory failure than the substitution of the Commission's business judgments for those of cable system owners and operators.

Finally, traditional cost-of-service regulation will likely retard the pace of innovation in cable distribution and thereby

¹⁰See Paragraph 43. The <u>Notice</u> seems unaware that one obvious alternative to the Commission playing Monday-morning quarterback with respect to the "prudent" nature of costs incurred -- including "excess" acquisition costs -- is to assess the extent to which the prices of effectively competitive systems reflect these "questionable" expenditures.

reduce the extent of accompanying programming innovations. As noted in our earlier paper, because regulation will limit the profits a cable operator may realize from such innovations, it lowers their expected return. Thus, some projects that would benefit consumers will not be undertaken under cost-of-service regulation. These adverse effects will be magnified by the regulatory delay accompanying requests to justify higher prices for new services and equipment that are based on their higher costs.

In short, the "backstop" proposed by the Commission is likely to be of only limited utility to cable operators and consumers. Given the onerous burdens that traditional cost-of-service proceedings impose on the regulated firms — including the costs of substantial delay — only those systems that have incurred extraordinarily large costs are likely to avail themselves of the backstop. The response of systems whose costs are "only" substantially higher than those of other systems will be to forego innovative investments and, in the longer run, to reduce service quality.

IV. What Is Cost-of-Service Regulation?

Many of the difficulties described in the previous sections arise because the Commission apparently equates cost-of-service regulation with traditional rate-of-return regulation. 11 Thus,

¹¹The Commission does address other forms of cost-based regulation in its discussion of streamlining, but it identifies these as "alternatives" to cost-of-service regulation. (See, e.g., Paragraph 72) As we discuss below, we believe that one of these alternatives is more consistent with the Commission's stated

for example, the Commission initially "solicited comments on such major components of cost-of-service standards as what should be included in the operator's ratebase, the proper rate of return and cost of capital related to cable systems, depreciation, operating expenses, and the optimal degree of cost-averaging under cost-of-service regulation." (footnote 8) Moreover, the Commission has indicated that its "framework will determine the price that operators may charge for cable service and the earnings that cable operators may achieve through cost-based rates." (Paragraph 8, emphasis added)

Finally, the Commission has characterized the "traditional formulation" in which a regulated firm is permitted "a reasonable opportunity to earn a fair rate of return on its invested capital" as "the overarching standard to govern cost-based rates for cable service." (Paragraph 20) But, as we show below, there is no necessary connection between permitting cable systems to demonstrate special circumstances, or unusual, high¹², or extraordinary costs, and the use of "traditional" cost-of-service regulation.

A number of consequences result from the Commission's equation of cost-of-service and rate-of-return regulation. The most pernicious of these is that the Commission's proposed approach

objectives, more workable administratively, and more likely to promote the public interest than is rate-of-return regulation.

¹²The Commission indicates that its cost-of-service regulation is intended to permit cost recovery in "high cost areas." (Paragraph 24)

apparently results in the need to consider, in each cost-of-service proceeding, a whole host of issues, many of which would be irrelevant in more focused inquiries. Thus, for example, a cable system that seeks higher rates solely because its franchise authority has imposed unusually costly requirements would, under the Commission's proposed approach, be required to justify the capitalized value of its subscriber lists, its depreciation practices, the treatment of its plant under construction, the allocation of costs to regulated services, and a myriad of other factors, none of which may be related to the reason for its unusual costs.

The Commission's attempt to simplify its cost-of-service proceedings through the use of standard showings and forms is understandable. However, its administrative burdens would be even smaller, and its approach made more congruent with its stated objective of using cost-of-service regulation as a backstop, if its proceedings were to focus solely on those costs that are the basis of a cable operator's request that it should be permitted to charge rates that are higher than the benchmark. By proposing an unnecessarily broad scope for its proceedings, the Commission is imposing needless costs on both itself and the cable industry. 13

¹³We are aware, of course, of the danger that an operator may attempt to justify higher rates by identifying only those of its costs that are unusually high, while ignoring those that are unusually low. However, this asymmetry can be dealt with by requiring the operator to demonstrate a significant difference between a particular element of its costs and those of some reference group in order to obtain rate relief. It does not require the Commission to adopt rate-of-return regulation.

A more promising alternative is, in fact, identified by the Commission, although it receives only limited attention in the Notice. Under the rubric of "streamlining," the Commission asks whether it should:

permit cable operators to document key cost factors, financial characteristics, or other combination of factors that could be said to justify existing rates. Operators who could demonstrate the existence of such factors might then be permitted to charge rates equal to the benchmark plus an 'add-on' amount attributable to those extraordinary factors. We solicit comment on what factors could be used to show that such 'add-ons' are presumptively cost-justified, thereby obviating the need for cost-of-service showings. (Paragraph 72)

We believe that the approach described here by the Commission is one. would appropriate and quarrel only characterization of this approach as something other than a costof-service showing. 14 Indeed, it is only by equating cost-ofservice and rate-of-return regulation that the Commission is led to characterize this streamlining approach as possibly "obviating the need for cost-of-service showings." We believe that this alternative is more consistent with the Commission's stated objectives for its regulatory backstop, more administratively, and more likely to promote the public interest than is rate-of-return regulation. For this reason, much of the rest of this paper is an attempt to explore how such a cost-based alternative might be implemented.

¹⁴We should note, however, that we do not endorse the streamlining alternatives discussed by the Commission in Paragraphs 73 and 74 of the <u>Notice</u>, because they are designed only to make rate-of-regulation more workable, rather than to replace it with an alternative form of cost-based regulation.

V. An Alternative Cost-of-Service Regime

A backstop regime for cable rate regulation should have a number of characteristics. First, it should specify the set of cable systems that will serve as the reference group for identifying unusually high costs. Second, it should permit easy identification of those cable system characteristics that may lead to extraordinary costs. Third, it should be designed to measure how "unusual" or "extraordinary" are these characteristics for any particular system, and to translate unusual characteristics into benchmark "add-ons." Considered as a whole, these characteristics will lead to a workable backstop approach, thus making the backstop accessible to those systems that confront unusually high costs. While we discuss each of these three components in turn, our discussion is meant to be exploratory and suggestive rather than definitive. More effort by the industry and the Commission is required before any streamlined backstop system can be implemented.

1. Which Systems' Costs Should Be the Reference Point?

The logic of the benchmark <u>cum</u> backstop system argues for using the costs of competitive systems as the reference point for systems seeking to demonstrate that they have unusual costs. That is, since the benchmarks are based on the rates, and presumably the costs, of competitive systems, those benchmarks are inappropriate for other systems with higher costs. However, as we have previously noted, the competitive systems are so few in number and so idiosyncratic, that there are difficulties in using the average

of their costs for the purposes of the backstop. ¹⁵ Moreover, the problems caused by the small number of competitive systems are exacerbated if systems are placed into more homogeneous subgroups.

An alternative to relying only on the competitive systems as a reference point is to use data for all systems with rates at or below the benchmarks prior to their adoption, whether or not they were initially classified as effectively competitive. This will somewhat increase the number of systems whose costs are included in the reference group, and may permit the creation of a larger number of subgroups. For both the competitive systems and systems pricing at the competitive level, the presumption is that the rates charged reflect the costs of providing cable service.

Finally, data from a sample of all systems might be used to develop the reference points. However, this is inconsistent with the basic logic of the benchmark <u>cum</u> backstop approach, because the benchmarks are based only on competitive systems, and the task is to determine the extent to which the costs of the regulated systems exceed the "typical" costs of the competitive systems. ¹⁶ Whether in fact this would be a desirable method depends, in part, on the extent of the difference between the average costs of competitive and non-competitive systems.

¹⁵Stanley M. Besen and John R. Woodbury, "An Analysis of the FCC's Cable Television Benchmark Rates," submitted in this docket, June 17, 1993.

¹⁶We should note that the Commission's proposal to collect cost data for a very small number of systems is not an adequate substitute for this approach. (Paragraph 80)

2. Which System Characteristics Lead to Unusually High Costs?

Cable systems may have unusually high costs for one, or both, of two reasons. First, some systems may have unusually high costs of acquiring the inputs, or factors of production, that are used to provide cable television service. Second, some systems, perhaps because of the unusual geographic and/or demographic characteristics of the areas they serve, may require a larger number of inputs to provide the same amount of service than do systems in more typical areas.

with respect to high factor costs, some cable systems, for example, operate in high-wage areas where the costs of hiring technical and administrative workers are above the average of the reference group. Similarly, some systems will operate in areas in which energy costs are higher than those of the reference group. And some systems may confront a higher cost of capital than that of the reference group because, for example, of the nature of local franchise regulation, or difficulties in predicting the system's future revenues.

Similarly, a large number of market characteristics may lead an operator to use more inputs in the construction and operation of its cable system than would be the case for the reference group. Such characteristics would likely include population density, 18

¹⁷It may be appropriate to place workers into finer categories if geographic differences in compensation rates vary significantly among such categories.

¹⁸The following factors ares not intended to be exhaustive, merely illustrative. We believe the Commission should undertake further study of the kinds of market factors that are likely to

since systems that serve less densely populated areas are likely to require greater travel time for technicians repairing outside cables, thereby requiring more technicians to serve the same number of subscribers. Given the number of subscribers, total costs can be expected to increase with the increase in plant miles. In addition, the construction costs of the cable system are likely to be higher when underground rather than aerial cable is used. Further, underground construction costs may be affected by local conditions, such as the availability of existing conduits, geological conditions, and local construction requirements.

Some characteristics of the system's franchise area may lead to higher marketing and customer service costs. For example, higher costs are likely in areas with high churn, the sum of new subscribers and disconnected subscribers as a percent of total subscribers. While the overall churn rate can be influenced by operator behavior, some aspects of the churn rate are beyond the operator's control. For example, the population in the franchise area may be highly mobile, so that the sum of the population inflow and outflow may be larger than for the reference group. This, in turn, may result in the need for greater marketing efforts to familiarize new consumers with the existence or offerings of the local cable system. Finally, cable systems in such areas may require more administrative personnel, or more sophisticated

lead to cost differences between any particular system and that of the reference group.

computing capabilities, to maintain current subscriber and billing lists.

Many of these costs may also be incurred if there is significant mobility within the franchise area. For example, the franchise area may contain a large number of multiple dwelling units in which there is considerable turnover. Adapting to this turnover may require the operator to employ more technical and administrative personnel than would be the case for the typical reference group system.

Some markets may be able to support more advanced, and therefore more costly, distribution systems. The demand for such systems may be related to market demographic characteristics, such as average age, family size, and income.

Similarly, some markets may be more prone to theft of service, or customer default, than the reference group. As a result, the cost per paying subscriber of offering cable service may be correspondingly higher. The tendency of any franchise area to exhibit these characteristics may also be captured by market demographics.

Some cable systems may be prone to more "wear and tear" of headend facilities, or cable distribution plant, because of unusual climactic conditions. This might be true for areas that experience temperature extremes different from those of the reference group, or that experience more snow or rainfall than the typical reference group system.

State or local laws regarding the construction of headend facilities, the installation of cable plant, and the operation of the cable system may be more constraining for some systems than for the reference group average. Such laws could include those designed to protect the environment or to maintain the aesthetics of a franchise area.

3. How Can These Characteristics Be Translated Into "Add-ons?

The backstop mechanism can permit "add-ons" to the benchmark rate to the extent that a system has higher-than-average costs because it faces high factor prices, and/or must employ an unusually large number of inputs to produce a given level of service. The question is how to translate these extraordinary situations into rate adjustments.

The most direct approach would be to compare the costs of the system claiming higher costs with those of the typical reference group system. For example, the Commission could define a number of cost categories, e.g., marketing costs, customer service costs, capital costs, etc. A system might then attempt to show that it has higher-than-average costs in one of these categories than systems in the reference group. If this difference is verified, the Commission could increase the benchmark rate for the system by the percentage difference between the system's costs and those of the reference group weighted by the proportion of total costs accounted for by the particular cost element.